

REMARKS

Claims 1-15 are all the claims pending in the application. Claims 16-29 have been canceled due to a previously-filed Response to Restriction Requirement. Claims 2-3, 5, 9, 11, and 13 stand objected to only as being dependent upon a rejected base claim, and would be allowable if rewritten in independent form to include all the limitations of the base claim and any intervening claims. Claims 2-3, 5, 9, 11, and 13 have been rewritten in independent form to place them in condition for immediate allowance.

Claims 1-15 stand rejected upon informalities. Claims 1, 4, 6-8, 10, 12, and 14-15 stand rejected on prior art grounds. In addition, the drawings and specification are objected to. Applicants respectfully traverse these objections/rejections based on the following discussion.

I. Drawing Objections

With respect to the objections to the drawings, a Submission of Corrected Formal Drawings is submitted simultaneously herewith. In addition, the following explanation is provided in response to some of the objections:

The Office Action objects to reference character 11 stating that it is used to identify the semiconductor material, semiconductor loop, and fin structures. However, the semiconductor material 11 is patterned using the hard mask 16 into the semiconductor loop that becomes the fin structures. Therefore, Applicants submit that reference character 11 is used consistently in drawings to represent the silicon material that is patterned into the loop and fin structures (see paragraphs 30-31). Using the same reference number in each of the drawings to represent the same material allows the reader to follow the process flow more clearly. Renumbering the material 11 as it is patterned into different shapes could possibly mislead the reader and confuse the understanding of the invention. Therefore, Applicants respectfully submit that use of the reference character 11 to show the semiconductor material in both its patterned and unpatterned states is proper and should remain in the drawings.

With respect to reference character 12, shown in Figure 1A, paragraph 30 explains that the sidewall spacers 12 are formed upon the sacrificial mandrel 10 and are above (and used to pattern) the mask material 16. Therefore, Figure 1A identifies the spacers 12 and not the mask material 16 because the spacers 12 are above the mask material (and would not appear in the top view shown in Figure 1A). However, Figure 1B illustrates the processing after the mandrel 10 and sidewall spacers 12 are removed, which shows the mask material 16 that remains. Therefore, since item 12 is a sidewall spacer that is used as a mask material to pattern the hard mask 16, it is proper to identify the same in the drawings as shown (see Figure 1A). Therefore, Applicants respectfully submit that reference character 12 properly designates the sidewall spacers used as the mask material to pattern the hard mask 16.

With respect to the objections to reference character 16, Applicants note that Figures 2A and 3A have been modified to identify the rectangular hard mask material 16, instead of reference character 11. This mask is used to pattern the underlying semiconductor loop 11 as shown in Figures 1B and 1C. Therefore, this hard mask layer of hard mask material that is patterned using the sidewall spacers 12 into a mask loop is properly identified and shown in the drawings (paragraph 30 and 31) as item 16.

With respect to reference character 30, which is used to identify the conductive contact material and Figures 3A-3C, 4C, and 4D, Applicants note that the drawings and specification consistently describe that the contact material 30 is deposited and patterned so that it acts as a conductive contact for the source and drain regions 42. The drawings and specification consistently describe the conductive material 30 that comprises the contacts for the source and drain regions. Therefore item 30 is properly illustrated in the drawings.

With respect to the reference character 31, which illustrates the insulating sidewall spacers 31 that are used to isolate the gate 20 from the conductive contacts 30 shown Figures 3C and 4C, Applicants respectfully submit that the drawings consistently illustrate these insulating sidewall spacers. This is consistent with the description in the specification in, for example, paragraph 33. Therefore, the insulating sidewall spacers identified as item 31 in Figures 3C and 4C are properly identified.

With respect to the objection to reference characters for the portions of the mask 50 and 51, Applicants respectfully submit that the two portions of the mask are individually identified in the drawings so that mask 50 (that is over the semiconductor loop 11) can be compared and contrasted with the mask 51 (that is adjacent to the semiconductor loop 11). Applicants submit that it is proper in the drawings to provide these two structures with different reference characters so as to distinguish their function and effect.

In addition, the drawings are objected to because it is argued that item 16 is not shown in Figure 1A. In response thereto, the specification has been changed to also reference Figure 1B. Additionally, the Office Action argues that paragraph 34 refers to item 44. This has been corrected to item 40. Further, the Office Action notes that the buried oxide layer (BOX) 13 was not mentioned in the specification. Again, the specification has been amended to address this objection. In view the foregoing, the Examiner is respectfully requested to reconsider and withdraw the objections to the drawings.

I. The Prior Art Rejections

Claims 1, 4, 6-8, 10, 12, and 14-15 stand rejected under 35 U.S.C. §102(e) as being anticipated by Grupp et al., hereinafter "Grupp" (U.S. 2004/0026736). Applicants respectfully traverse these rejections based on the following discussion.

A. The Rejection Based on Grupp

The Grupp reference relied upon in the Office Action includes two fins that are connected to the same source and drain regions and covered by the same gate (see Figures 5A and 5B of Grupp). To the contrary, as illustrated in Applicants' Figure 5B, the inventive structure includes a first fin 42 that has a channel and source and drain regions, and a second fin 41 that only has a channel region. The Office Action appears to argue that because the source and drains are

separate from the fins in the Grupp reference, that the fins in Grupp can be considered to only have a channel region.

In order to more clearly distinguish the claimed invention from such a structure, the following clause has been added to independent claims 1 and 8: "said channel region of said second fin is devoid of a connection to any source or drain regions." Applicants submit that this clearly distinguishes the claimed invention from the applied prior reference because, in Grupp, each of the fins is connected to a source and drain region. To the contrary, the inventive second fin is specifically designed to only have a channel region and to not be connected to any source or drain region.

Therefore, it is Applicants position that because Grupp does not teach or suggest a structure that includes a second fin that is not connected to any source or drain region, Grupp does not anticipate the rejection. Further, Applicants respectfully submit that Grupp does not even suggest the inventive structure and therefore would not render the invention obvious. In view the foregoing, it is Applicants position that independent claims 1 and 8 are patentable over Grupp. Further, dependent claims 4, 6, 7, 10, 12, 14, and 15 are similarly patentable, not only by virtue of their dependency from a patentable independent claim, but also by virtue of the additional features of the invention they define. In view of the foregoing, the Examiner is respectfully requested to reconsider and withdraw this rejection.

II. Formal Matters and Conclusion

With respect to the objections to the specifications and claims, the specification and claims have been amended as recommended in the Office Action, to overcome these objections. With respect to the objection to the drawings, a Submission of Corrected Formal Drawings is submitted herewith. In view of the foregoing, the Examiner is respectfully requested to reconsider and withdraw the objections to the specification, claims and drawings.

In view of the foregoing, Applicants submit that claims 1-15, all the claims presently pending in the application, are patentably distinct from the prior art of record and are in condition

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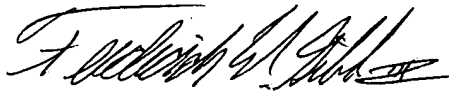
for allowance. The Examiner is respectfully requested to pass the above application to issue at the earliest possible time.

Should the Examiner find the application to be other than in condition for allowance, the Examiner is requested to contact the undersigned at the local telephone number listed below to discuss any other changes deemed necessary.

Please charge any deficiencies and credit any overpayments to Attorney's Deposit
Account Number 09-0456.

Respectfully submitted,

Dated: 10/16/04



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